

# Impervious Surface - Zoning Regulations

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# Presentation Overview

- History/background
- Current regulatory standards
- Treatment of impervious surface
- Mitigation
- Application process
- Long-term maintenance
- Summary



# History/Background

- Previous ordinances

- ▶ Building bulk, structure location, & open space (non-roofed areas)
- ▶ Regulation limited to B-P and P-I
- ▶ Condition of rezone, conditional use, plat, etc.

- Current ordinance (Sept. 2016)

- ▶ NR116 & State Statute requirements
  - Applies to unincorporated riparian lots & lots entirely within 300 ft. of a waterway
  - Protects water quality, fish & wildlife habitat, prevents pollution of waters



# Impervious Surface

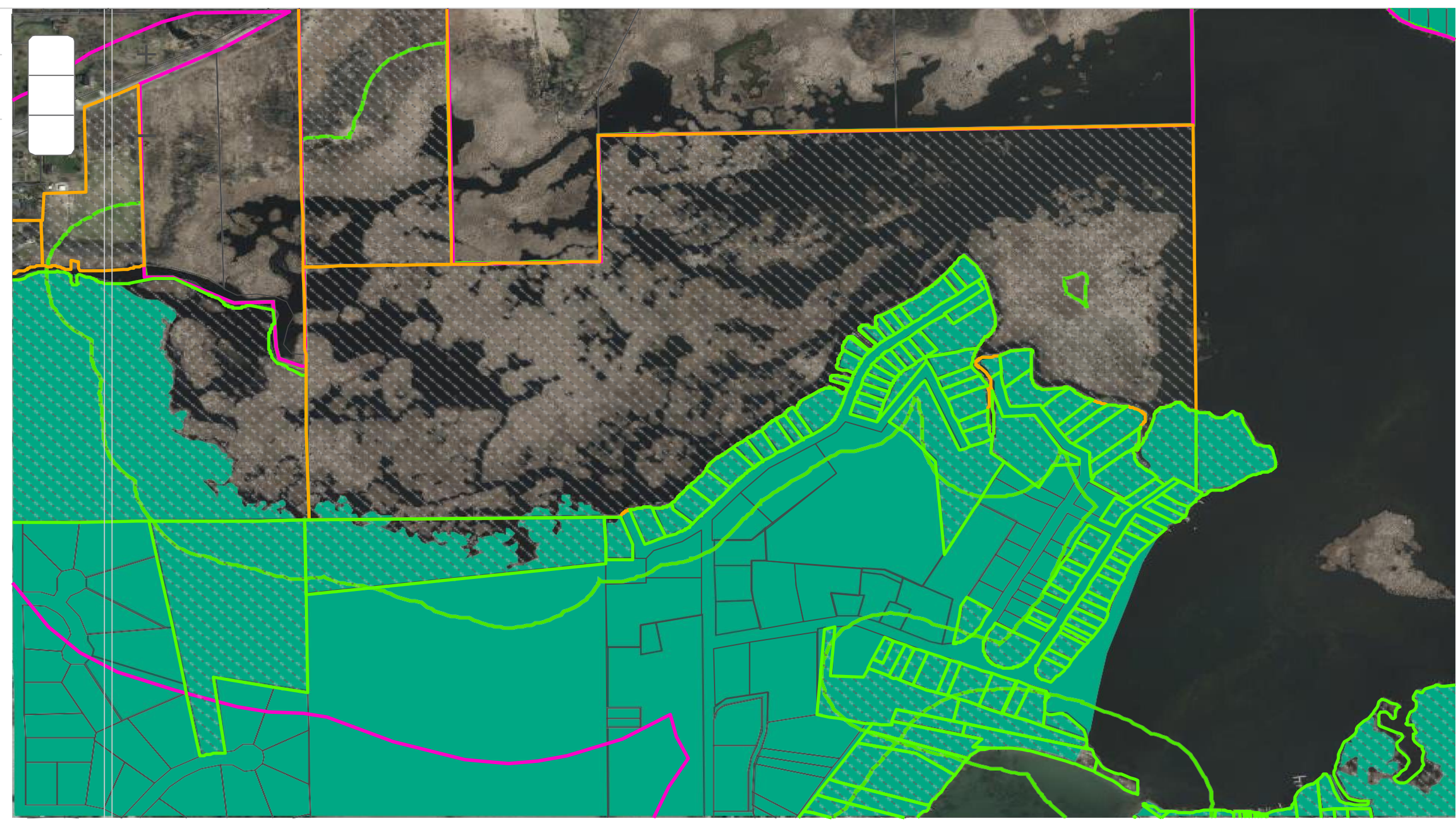


# Regulatory Standards

<u>General Standard</u>	<u>Highly Developed Shorelines</u>
15% maximum (w/o mitigation)	Up to 30%- residential use (w/o mitigation)
30% maximum (w/ mitigation)	Up to 40%- residential use (w/ mitigation)
	Up to 40% commercial/ind. use (w/o mitigation)
	Up to 60%- commercial/ind. use (w/ mitigation)

\*Existing IS can be maintained, repaired, replaced, relocated or modified







# Treated Impervious Surface

- ▶ Impervious Surfaces may be excluded from the calculation, if:
    - ❑ 1<sup>st</sup> ½ in. of runoff from impervious surface is treated by Stormwater BMP, or
    - ❑ 1<sup>st</sup> ½ in. of runoff from impervious surface discharges to an internally drained pervious area that retains the runoff on or off the parcel and allows infiltration into the soil
- \* Infiltration or treatment system must comply with technical standard/guidance document

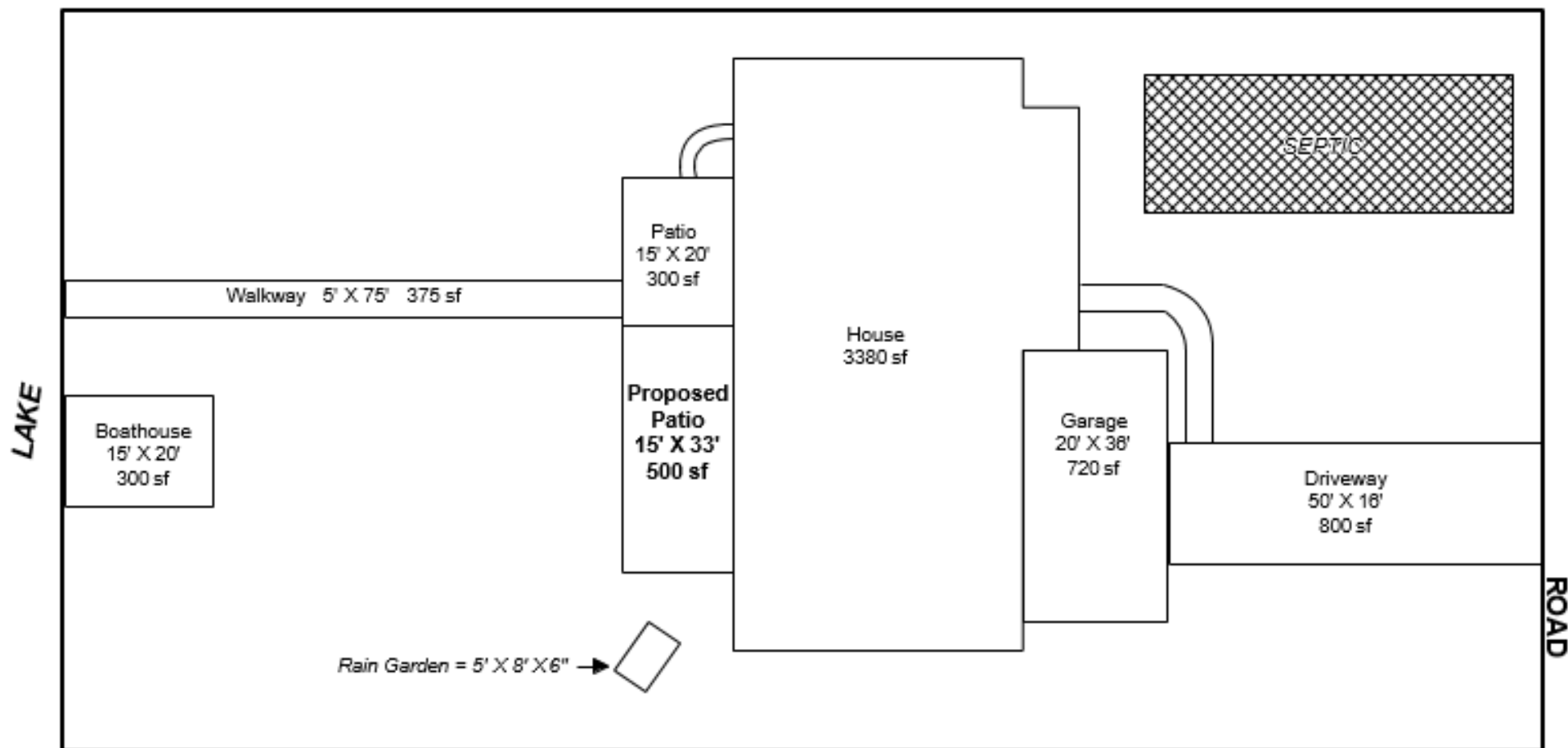


# SAMPLE LAKE LOT

200' X 100' = 20,000 sf

6000 sf of existing impervious surfaces (w/o proposed patio) = 30% IS coverage

1 inch = 20 feet



## Impervious Surface ("IS") Calculation

6,000 sf (existing IS) + 500 sf (proposed IS) = 6,500 sf

6,500 sf (existing & proposed IS) / 20,000 sf (lot size) X 100 = 32.5% (IS coverage)

The applicant must treat or mitigate 2.5% of the IS coverage assuming 30% is allowed by right.

## IS Treatment – Rain Garden Sizing Calculation to Infiltrate the First 1/2" of Runoff from the Proposed Patio

Target Infiltration Volume = 500 sf X .04 feet (same as .5 inch) = 19.8 cubic feet

Rain Garden Size (assume 6 inches deep) = 5 feet wide X 8 feet long X .5 feet deep = 20 cubic feet



# Mitigation

(proportionately offsets impacts)

- ▶ Vegetative buffers
- ▶ Stormwater management practices
- ▶ Removal/relocation of nonconforming accessory structures
- ▶ Removal of impervious surfaces
- ▶ Neutral or earth tone colors
- ▶ Shoreline modifications
- ▶ Restoration of wetlands



# Application Process

## ► Impervious Surface Zoning Permit Application

Type of Impervious Surface (include overhangs) Exclude decks, patios, etc. that are directly below other I.S.	Existing Square Footage	Post-Project Total Sq. Ft. (complete below prior to project)
Dwelling		
Attached Garage		
Accessory building # 1 (e.g., detached garage, shed, barn, boathouse, pole building, etc.)		
Accessory building # 2 (see examples above)		
Sum of additional accessory buildings (if more than two exist)		
Deck(s)		
Patio(s)		
Retaining walls (one sq. ft. per lineal ft.)		
Driveways (incl. paved, concrete, gravel and compacted areas)		
Sidewalks (incl. paved, concrete, gravel and compacted areas)		
Miscellaneous impervious surfaces		
<b>Total Impervious Surface Area</b> (total of lines 1 through 11)		

# Application Process Cont.

## ► Stormwater Permit Application (LRD)

- ❑ The treated impervious surface exclusion standards shall be met.
- ❑ All technical standards of the Stormwater Ordinance shall be met.

\*A qualified professional may be required to prepare any necessary plans.

- ❑ Financial guarantee required to ensure stormwater BMP is installed correctly.
- ❑ Obligations and long-term maintenance requirements shall be recorded





A photograph of a modern house with a paved driveway and a garden path. The house has a dark exterior and a light-colored garage door. The driveway is made of interlocking bricks, and there is a concrete path leading to the front door. The garden has some plants and a small tree.

# Long-term Maintenance

- ▶ Self-inspection required after 1 yr., 3 yr. and every 5 yrs. after that.
- ▶ Inspection report: pictures, assessment of conditions, & planned remedial activities.
- ▶ Qualified professional may need to complete inspection & report, specified at time of permit issuance.
- ▶ Periodic staff inspections to ensure success of self-certification system.



# Summary

- ▶ Do impervious surface regulations apply to the property?
- ▶ How much impervious surface is on the property now?
- ▶ How much impervious surface is proposed?
- ▶ Is treatment or mitigation required? Which do you prefer?



## Summary cont.

Apply for Zoning Permit  
**PRIOR** to Stormwater Permit

- ▶ Submit a Zoning Permit application
- ▶ If treatment is required, submit a Stormwater Permit application
- ▶ Submit financial assurance and record maintenance requirements
- ▶ Obtain permits and begin construction!
- ▶ Inspect treatment for as-built certification and long-term maintenance



Thank you!

Questions ?



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